INTRODUCTION

My name is Robert Grizzard. I am a licensed Amateur Radio operator, holding callsign KG7YY. Prevuiously I held the callsigns KC4ZRF, TA2ZR, and KA7FSO. I also hold a General Class Radiotelephone Operator's License, number PG-GB-03791. Previously I held a Second Class Commercial Radiotelephone license, number P2-11-46502. In addition, I am a veteran of the United States Air Force, where I served as a Wideband Communications Equipment Technician, AFSC 2E171 (converted from 30470). Since I was first licensed in 1978 as P2-11-46502 I have worked on systems from 1 Hz to 500 THz and powers from that imparted by starlight to 10 kW of RF output (and that latter system actually had 50 kW in the beam).

DISCUSSION

Ms. O'Connor and Mr. Karp, counsel for Satius, make the following proposal:

"[...] Accordingly, Satius proposes the following limitations to
Access BPL analog and DSP systems.8
Frequency Field Strength Measurement Distance
9-490 Khz 2,400/F(Khz) 300 meter
0.49-1.705 Mhz 24,000/F(Khz) 30 meter
1.705-54 Mhz 500 uV/meter 300 meter
54-88 Mhz 100 uV/meter 30 meter
88-216 Mhz 150 uV/meter 30 meter
216-470 Mhz 500 uV/meter 300 meter
470-960 Mhz 200 uV/meter 30 meter
above 960 Mhz 500 uV/meter 300 meter"

In Title 47 CFR Part 15.15(c), this Commission states explicitly that "Parties responsible for equipment compliance should note that the limits specified in this Part will not prevent harmful interference under all circumstances". Satius wishes to increase radiated field strength from 1.705 MHz to 30 MHz from its present limit of 30 uV/Meter at 30 Meters and from 30 to 54 MHz from its present limit of 100 uV/Meter at 3 Meters to 500 uV/Meter at 300 Meters. Additionally, they wish to increase radiated limits between 54 MHz and 88 MHz from their present 100 uV/Meter at 3 Meters to 100 uV/Meter at 300 Meters. The Commission has already stated that present limits will not prevent harmful interference. Satius wishes to multiply the limit at HF by a factor of 15 and the distance by a factor of 10. If present limits are inadequate to protect from harmful interference, surely the extended limits are as well.

Mr. Lazarus, counsel for Current Technologies LLC, states "We are starting with a noisy radio-frequency environment, and the Commission must take that into account in assessing the impact of BPL. No BPL regulation can "re-quiet" the environment back to the pristine state that some commenters prefer". This almost sounds like Current Technologies LLC has done the testing, discovered that their system does pollute the RF spectrum -- and is going to proceed anyway. If this testing has indeed been done then it behooves Current Technologies LLC to release the results so the Commission can have some solid fact to go on instead of hand-waving about "[M]ost [filings] grossly overstat[e] the interference potential of BPL".

As he argues for Class A status for the BPL injectors instead of Class B, Mr. Lazarus states "(At 30-88 MHz, where many BPL systems will operate, Class A is only 27 billionths of a watt.)" An extremely strong amateur radio signal is 50 trillionths of a Watt. A perfectly usable Amateur radio signal is 195 quintillionths of a Watt -- 1/138000th of the power Mr. Lazarus describes as "only". If I could be assured the distant station I was trying to establish communications with would generate a signal that would develop 27 billionths of

a Watt on my antenna every time I wished to communicate with that station I would be extremely happy.

Mr. Stenger, counsel for Electric Broadband, says, "Moreover, experience with BPL systems to date indicates that they comply with the carrier current system rules and that the emissions limits can be increased without causing harmful interference to other users". We have already seen that the Commission acknowledges that present emission limits are not a guarantee of freedom from interference. Mr. Stenger also says, "With regard to emissions limits, in its work with the leading vendors and utilities who are the early adopters of BPL technology, Electric Broadband has not seen interference issues arise under the existing CCS rules. Experience appears to indicate that those limits can and should be raised to improve the functionality of BPL technology without harming other users". The problem with what Mr. Stenger proposes is that, despite his assurances that higher limits will not negatively affect other users, experience gained in Europe and Japan shows that BPL can be expected to harm other users.

Mr. Stenger then says, "Likewise, third parties must be held responsible for taking steps to mitigate their vulnerability to interference". The issue with the multitude of NIST, shortwave broadcast, television broadcast, NTIA, amateur, low VHF public safety, low VHF business band, aviation, public coast station, Part 15 frequencies where cordless telephones and baby monitors operate, and other frequencies that will be deleteriously affected by BPL is not one of a receiver improperly responding to an off-channel signal; it is one of a receiver properly responding to an on-channel signal that is there improperly only because the "non-interfering" BPL wasn't quite so interference-free as the proponents claimed.

SUMMARY

The overwhelming majority of statements from BPL proponents state that emission limits can be raised even though experience shows that present limits don't forestall interference to over-the-air services. The BPL proponents often make reference to their studies without disclosing their methodologies or the numbers they derived from the studies then complain about people exaggerating the risk of interference. The few numbers the BPL proponents do present indicate they wish to be allowed to generate interfering RF at levels several orders of magnitude higher than those necessary for communications. The BPL proponents seek to send RF across unbalanced unshielded wires, and all my experience tells me that unshielded unbalanced wires radiate and are more properly known as "antennas". Finally, the BPL proponents seek to place the onus for relief from interference upon the injured party rather than assuming it themselves as the injuring party.

CONCLUSION

I respectfully request this Commission reevaluate the desirability of putting broadband Internet service on HF and low-band VHF carriers then imposing those carriers on unshielded unbalanced wires. One resource now available to this Commission is the videotaped result of empirical tests conducted by Ed Hare, W1RFI, in several of the field test areas. The story is available at http://www.arrl.org/news/stories/2003/08/08/2/?nc=1; the video is available from a link on the page or at http://216.169.96.120/BPL_Trial-web.mpg.

Sincerely,

Robert V. Grizzard, KG7YY